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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,628	07/07/2000	Johan Karoly Peter Galyas	040020-276	7999

27045 7590 04/08/2003

ERICSSON INC.
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EXAMINER

LOWE, TREFFANEY R

ART UNIT	PAPER NUMBER
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2697

DATE MAILED: 04/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/612,628

Applicant(s)

GALYAS, JOHAN KAROLY PETER

Examiner

TREFFANEY R LOWE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 1,5,7,8,10,11,14 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Drawings

Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because each item should be properly labeled, (i.e.: Fig. 1a, 11 should read “encoder”. Also the abbreviations should be spelled out). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 5, 7, 8, 10, 11, 14 and 15 are objected to because of the following informalities: the claims list abbreviations, which need to be spelled out in the claim, i.e. (CRC). Appropriate correction is required.

Claim 14 is objected to because of the following informalities: spelling error in the 3rd line of the claim, “och”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Regarding **claim 14** is rejected because the claim is ambiguous. The office is uncertain of the meaning of "och" and therefore cannot properly examine the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Fall (U.S. Patent 5,757,810).

Regarding **claim 16**, Fall discloses a mobile radio network (PLMN) comprising

At least one stationary speech encoder unit (col. 1, lines 30-31) having a connection to a duplex PCM link (col. 1, lines 26-28), a connection to a packet-oriented link (col. 1, lines 28-30), having means to compress a stream of speech from the PCM link and pass it on, in compressed form, as a stream of speech blocks (SPB) through the packet-oriented link (col. 1, lines 35-40), and having means to receive, from the packet-oriented link, a stream of speech blocks, means to decode the speech blocks and forming a decompressed speech stream (col. 2, lines 1-4), being sent through the PCM link (col. 2, lines 4-5),

At least one base station (BTS) connected to the packet-oriented link and connected to at least one radio link (RL) (col. 1, lines 26-30) having means to receive a stream of speech blocks (SPB) from the packet-oriented link (col. 1, lines 32-35) and pass the stream of speech blocks (SPB) on through the radio link (RL) (col. 1, lines 56-58), and having means

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to receive, from the radio link (RL) a stream of speech blocks and pass them on through the packet-oriented link, (col. 1, lines 58-65) and

A mobile station (MS) having means to receive, from the radio link (RL) the stream of speech blocks (SPB) means to decode the speech blocks (SPB) forming a decompressed stream of speech (col. 1, lines 62-65), means to electrically register acoustic speech, means to compress the registered speech, at which speech blocks (SPB) are formed, and means to send the speech blocks (SPB) through the radio link,

Characterized by

Means to provide, in the speech encoder unit as well as in the mobile station (MS), created speech blocks (SPB) with parity bits, (col.2, lines 27-34) and

Means to compare, in the mobile station (MS) and the speech encoder unit, the content of received speech blocks (SPB) with accompanying parity bits for possible error discovery, to be able to, when errors occur, hide the errors during the decoding of the received speech blocks (SPB). (col. 2, lines 34-39)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellwig et al. (U.S. Patent 6,295,302 B1) hereinafter reference to as Hellwig in view of DeJaco (U.S. Patent 6,205,130 B1).

Regarding **claim 1**, DeJaco discloses a method for transmission, in real time of a digitally represented data stream, having a first bit rate, comprising the steps of:

- Compressing, at a first node, by encoding the data stream, whereby a second bit rate, being considerably lower than the first bit rate, is obtained, (col. 1, lines 46-61)
- Decompressing the data stream at a second node, whereby the first bit rate is regained, (col. 3, lines 16-21)

Characterized by the further steps of

- Supplying parity bits (CRC) to the data stream, at the first node, after the compression, whereby the data stream obtains a third bit rate, being slightly higher than the second rate, (col. 2, lines 1-9 and col. 5, lines 23-26)
- Comparing, at the second node, said parity bits (CRC) in relation to the data stream for any discovery of erroneously detected data in the stream. (col. 2, lines 15-18 and col. 5 lines 35-38 and 61-64).

However, DeJaco fails to specifically disclose sending compressed data stream through a packet-oriented transmission. However, the concept of sending compressed data stream through a packet-oriented transmission is well known in the art, as taught by Hellwig.

In the same field of endeavor, Hellwig discloses an alternating speech and data transmission in digital communications systems which is capable of:

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- Sending the compressed data stream through a packet-oriented connection, (col. 3, lines 58-62)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify DeJaco by specifically providing a means to send the compressed data stream through a packet-oriented connection taught by Hellwig, for the purpose of improving the transmission of compressed information with real time requirement in a packet oriented information network.

Regarding **claim 2**, Hellwig and DeJaco discloses everything claimed, as applied above, in addition Hellwig teaches a method, wherein one of the first and the second nodes is a mobile station (MS) with a connection through a radio link (RL). (col. 3, lines 61-67).

Regarding **claim 3**, Hellwig and DeJaco discloses everything claimed, as applied above, in addition DeJaco teaches a method according to claim 1 or 2, wherein the data stream, when being compressed, is divided into segments corresponding to time periods of a certain length, and for each segment a data block (SPB) is created, containing parameters representing the data of the segment. (col. 2 line 66 to col. 3, line 2)

Regarding **claim 8**, Hellwig and DeJaco discloses everything claimed, as applied above, in addition Hellwig teaches a method according to claim 3, wherein the data stream constitutes digitally converted speech, the data block (SPB) is a speech block (SPB) and the parameters are speech parameters. (Abstract)

Regarding **claim 9**, Hellwig and DeJaco discloses everything claimed, as applied above, in addition Hellwig teaches a method according to claim 3, wherein the data stream is a digitally converted video signal. (col. 1, lines 59-65)

Regarding **claim 10**, Hellwig and DeJaco discloses everything claimed, as applied above, in addition Hellwig teaches a method according to claim 3, wherein the data blocks (SPB) are sent to the second node even if the datablock (SPB) is erroneously detected during the sending. (col. 5, lines 23-27)

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellwig and DeJaco as applied to claims 1-3 above, and further in view of Kalliokulju et al (U.S. Patent 6,385,451 B1) hereinafter referenced to as Kalliokulju.

Regarding **claim 4**, Hellwig and DeJaco discloses everything claimed, as applied above in claim 3, however, neither Hellwig or DeJaco specifically disclose a method wherein the importance of the parameters, in relation to each other, has been graded and the position of the parameters in the data block is sorted according to importance. However, the concept of grading and positioning the parameters in the data block according to importance is well know in the art, as taught by Kalliokulju.

In the same field of endeavor, Kalliokulju teaches a method according to claim 3, wherein the importance of the parameters, in relation to each other, has been graded and the position of the parameters in the data block is sorted according to importance. (col. 6, lines 24-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hellwig and DeJaco by specifically providing a method to grade and position the parameters in the data block according to importance.

Regarding **claim 5**, Hellwig, DeJaco and Kalliokulju discloses everything claimed, as applied above in claim 4, in addition Hellwing teaches a method, wherein the parameters are

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divided into two classes, depending upon their importance, and where the parameters in the most important class are supplied with said parity bits (CRC) for error check. (col. 2, lines 34-38 and 43-47), also Kalliokulju discloses a method wherein the parameters are divided into two or more classes (col. 3, lines 14-41)

Claims 6-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellwig, DeJaco and Kalliokulju as applied to claim 6 above, and further in view of Jarvinen et al. (U.S. Patent 6,470,470 B2), hereinafter referenced to as Jarvinen.

Regarding **claim 6**, Hellwig, DeJaco and Kalliokulju discloses everything claimed, as applied above in claim 4, however Hellwig, DeJaco and Kalliokulju fail to specifically provide support for the method, wherein each parameter is represented, in the data block, by at least two bits with different significance, and the position of the two bits, in the data block, is sorted according to said significance. However, the office contends that is known in the art where bits having two different significance, and the position of the two bits in the data block are sorted according to said significance, as taught by Jarvinen.

In a similar field of endeavor, Jarvinen discloses a method, wherein each parameter is represented, in the data block, by at least two bits with different significance, and the position of the two bits, in the data block, is sorted according to said significance. (col. 8, lines 34-39)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Hellwig, DeJaco and Kalliokulju by providing a method wherein each parameter is represented, in the data block, by at least two bits with different significance, and the position of the two bits, in the data block, is sorted according to said

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significance, as taught by Jarvinen for the purpose of ensuring transmission of the most important data.

Regarding **claim 7**, Hellwig, DeJaco, Kalliokulju and Jarvinen discloses everything claimed, as applied above in claim 6, in addition Jarvinen discloses a method, wherein bits having a high significance is supplied with said parity bits (CRC) for error check. (col. 4, lines 11-16)

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellwig et al (U.S. Patent 6,295,302 B1) hereinafter referenced to as Hellwig in view of Kalliokulju et al. (U.S. Patent 6,385,451) hereinafter referenced to as Kalliokulju.

Regarding **claim 11**, Hellwig discloses an encoder unit having means to receive a data stream having a first bit rate, and means to compress the data stream by dividing the data stream into segments corresponding to partial periods, and for each partial period create a data block (SPB) containing parameters representing the data in the corresponding segment, whereby a stream of data blocks (SPB) is produced having a second bit rate considerably lower than the first bit rate. (col. 9, lines 5-14)

Characterized by

Means to supply parity bits to the data block (SPB), for the discovery of errors occurring during transmission of the data block (SPB). (col. 2, lines 34-38 and 43-47). However Hellwig does not specifically teach a means to sort the position in each data block of the parameters being part thereof. However, being able to sort the data blocks according to a ranking order is well known in the art, as taught by Kalliokulju.

In the same field of endeavor, Kalliokulju discloses a means to sort the position in each data block (SPB) of the parameters being part thereof, alternatively the bits being part thereof, according to a ranking order, specified in advance, based on the mutual importance of the parameters, alternatively of the bits, (col. 6, lines 24-30).

Regarding **claim 12**, Hellwig and Kalliokulju discloses everything claimed, as applied above in claim 11, in addition Hellwig teaches an encoder unit having means to speech-encode the incoming data stream when it represents speech. (col. 6, lines 12-19)

Regarding **claim 13**, Hellwig and Kalliokulju discloses everything claimed, as applied above in claim 4, in addition Kalliokulju teaches an encoder unit according to claim 11, having means to video-encode the incoming data stream when it constitutes a video signal. (col. 6, lines 12-19)

Regarding **claim 15**, Hellwig and Kalliokulju discloses everything claimed, as applied above in claim 11, in addition Hellwig teaches a mobile radio network with an encoder unit according to any of Claims 11-14. (col. 6, lines 12-19)

Regarding **claim 16**, Fall discloses a mobile radio network comprising
At least one stationary speech encoder unit having a connection to a duplex PCM link, a connection to a packet-oriented link, having means to compress a stream of speech from the PCM link and pass it on, in compressed form, as a stream of speech blocks (SPB) through the packet-oriented link (col. 8, lines 22-25), and having means to receive, from the packet-oriented link, a stream of speech blocks, means to decode the speech blocks (Fig. 1, #11) and forming a decompressed speech stream, being sent through the PCM link (Fig. 1, #13),

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At least one base station (BTS) connected to the packet-oriented link and connected to at least one radio link (RL) having means to receive a stream of speech blocks (SPB) from the packet-oriented link and pass the stream of speech blocks (SPB) on through the radio link (RL), and having means to receive, from the radio link (RL) a stream of speech blocks and pass them on through the packet-oriented link, (Fig. 1 and 3 and col. 9, 39-45) and

A mobile station (MS) having means to receive, from the radio link (RL) the stream of speech blocks (SPB)(col. 9, lines 36-41), means to decode the speech blocks (SPB) forming a decompressed stream of speech (col. 9, lines 41-42), means to electrically register acoustic speech, means to compress the registered speech, at which speech blocks (SPB) are formed, and means to send the speech blocks (SPB) through the radio link,

Characterized by

Means to provide, in the speech encoder unit as well as in the mobile station (MS), created speech blocks (SPB) with parity bits, and

Means to compare, in the mobile station (MS) and the speech encoder unit, the content of received speech blocks (SPB) with accompanying parity bits for possible error discovery, to be able to, when errors occur, hide the errors during the decoding of the received speech blocks (SPB).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TREFFANEY R LOWE whose telephone number is 703-305-5593. The examiner can normally be reached on M-F: 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFERY HOFFSASS can be reached on 703-305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9430 for regular communications and 703-746-9430 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0677.

trl
April 4, 2003


Richmond Dorvil
Primary Examiner